



**US Army Corps
of Engineers®**
Engineer Research and
Development Center

Design for Wave Protection at Chicago Harbor, Illinois

Description

Chicago Harbor is located on the southwestern shoreline of Lake Michigan at the mouth of the Chicago River. The Chicago Harbor Breakwater system is a combination of several types of structures combined to provide protection to the Chicago Harbor infrastructure. The outer breakwaters have deteriorated over the years. Significant overtopping of the structures occurs during storms resulting in unacceptable wave heights in the harbor. Marinas protected by the inner breakwaters also experience damage to their facilities and small craft due to excessive wave action during storms.



General view of Chicago Harbor, Illinois physical model

Issue

At the request of the U.S. Army Engineer District, Chicago, a physical hydraulic model was designed and constructed at the U.S. Army Engineer Research and Development Center by the Coastal and Hydraulics Laboratory to study wave conditions for existing conditions and proposed harbor modifications. The impacts of various hypothetical breakwater breaches on wave conditions in the harbor were also studied.

Sponsors

U.S. Army Engineer District, Honolulu (HED); State of Hawaii Department of Transportation.

Point of Contact

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